Scheme of Fires Matrix and PLOT-CR: Tools for Integrating Brigade Fires

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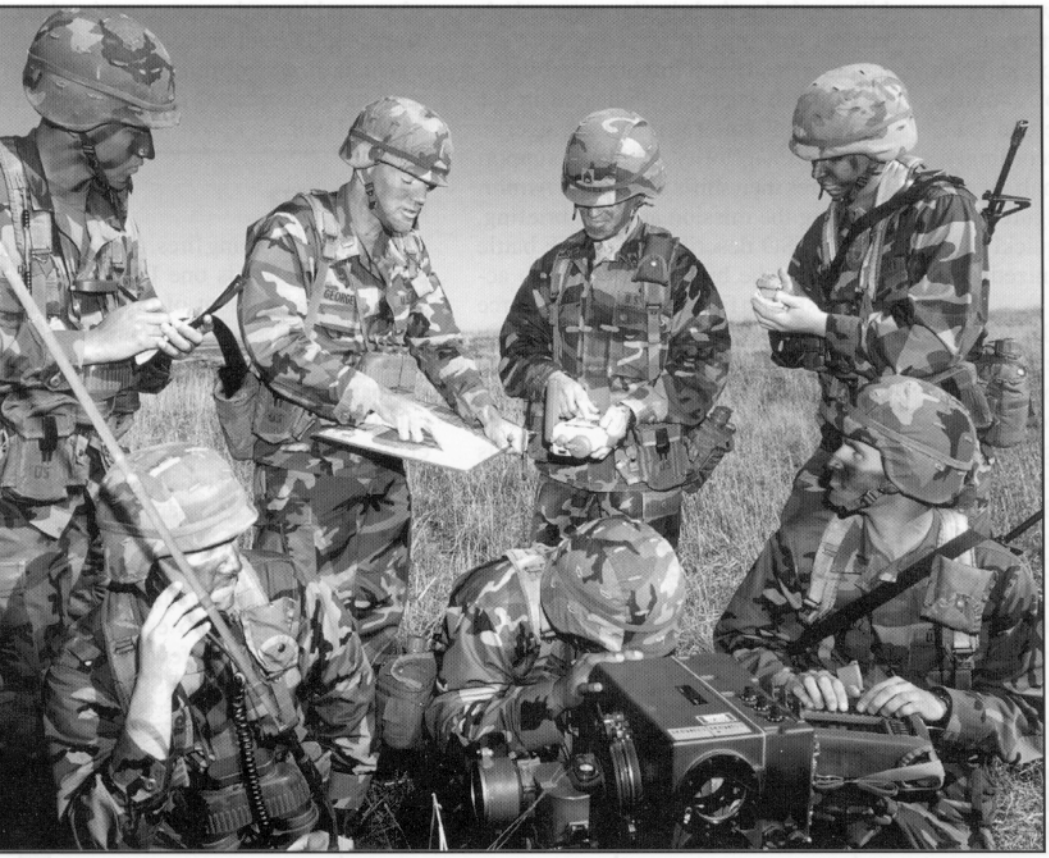

Many task force (TF) commanders and their fire support officers (FSOs) don't understand the brigade commander's concept of fires or don't know how to integrate that concept into TF plans. The result is the TF indirect fires are out of synch with the brigade fires. Further, the TF doesn't realize its fires are out of synch until the rehearsal, normally just before "line of departure." That's too late.

In addition, even if the TF fire plan *does* support the brigade commander's concept of fires, FSOs often don't use a standardized means to clearly and systematically convey resourcing or other relevant target information to their "shooters." The shooters, the fire support team (FIST) members, are where the "rubber meets the road." Without the right information and resourcing, the final sequential link to implementing the brigade commander's concept of fires is broken.

These disconnects can be reduced by the addition of two tools: the brigade/TF scheme of fires matrix and the application of the company FIST mnemonic PLOT-CR: purpose, location, observer, trigger, communications net and rehearsal. This article discusses these tools for integrating and synchronizing fires from the brigade to the company levels.

Scheme of Fires Matrix

The ability of TF commanders and FSOs to understand the brigade commander's concept of fires prior to the task force's beginning course of action (COA) development is critical to creating an executable TF fire support plan. To facilitate that understanding, fire supporters have developed matrices that incorporate an observation plan, radar coverage plan and a scheme of fires—many of which are quite good. However, these matrices are sometimes confusing to the TF commander and often poorly understood by the FSO because they do not address the *task* and *purpose* for the target, the *method* for accomplishing the task and the desired *end state*.

TF FSOs often begin mission analysis and COA development without understanding the brigade plan. The TF FSO receives no guidance from the brigade FSO on the purpose of each target, when each task force will receive priority of fires or when responsibility for those fires will transition between the two task forces. The result is the TF commander's guidance to his FSO conflicts with the brigade commander's guidance and plan.

The brigade and the TF FSOs don't realize their plans lack synchronization until the brigade fire support rehearsal. This late discovery does not leave enough time for TF FSOs to consult with their maneuver commanders to ensure indirect fires are synchronized with the direct fire plan. The result: a scheme of fires that, in reality, is not executable at the TF level.

The scheme of fires matrix (see the figure on Page 34) discussed in this article outlines the target task, purpose, method and end state; is easily understood; and provides guidance to the task force to develop a plan. All levels of maneuver (sergeant through colonel) should understand it because it uses maneuver doctrinal terminology.

The "Task" portion of the matrix is what action is taken to accomplish the commander's intent for the target. The "Task" focuses on the enemy and specifies the formation the commander wants to attack, the function of that formation he wants to influence and the targeting effect he wants to achieve.

In "Purpose," the FSO clearly states why the commander wants the task accomplished in terms of how it helps the maneuver plan. "Method" is how the task will be accomplished and by what asset in terms that allow the FSO to determine the volume and duration of fires and the type of munitions. "End State" is the outcome of accomplishing the task and allows the executor to know when to move to the next fire support event.

As he develops this matrix, an FSO quickly can tell whether or not his unit's fire support can achieve the end state and advise the commander accordingly. Just by reviewing the top half of the matrix (as shown in the figure), the maneuver commander can quickly determine if the plan is synchronized with his scheme of maneuver.

For example, in the figure, the brigade commander can easily determine the southern motorized rifle platoon (MRP) will be destroyed prior to crossing the line of departure (LD) using close air support (CAS) and artillery. He also can see that the FSO is allowing 30 minutes to adjust the smoke to cover TF 3-81 Infantry before LD. Upon LD, the FSO has planned 30 minutes of suppressive fires on the objective and a 60-minute smoke screen to cover the task force while it occupies its position.

Based on the brigade scheme of fires matrix, the TF commander can refine his targets, but most importantly, he clearly can see what the brigade is trying to accomplish with fires. Using the matrix, the TF FSO will be able to see when the brigade will transition indirect fires from the brigade to task force or from task force to task force responsibility and what the brigade commander's critical fire support tasks are. For example, after TF 3-8 Infantry establishes two breach lanes (as indicated in the "End State" line for the last trigger in the figure), priority of direct support (DS) fires then shifts to TF 3-92 Armor.

During the mission analysis briefing, the TF FSO describes to the TF battle staff what the brigade is trying to accomplish with fires *before* the task force begins COA development. The matrix allows the TF commander and his FSO to easily understand the intent for every fire support event.

The bottom portion of the matrix is reserved for other relevant information. Often it includes the observation plan, fire support coordination measures (FSCM), airspace coordination areas (ACAs), CAS timing information, radar zones and miscellaneous remarks.

This matrix is easily adapted to existing tactical standard operating procedures (TACSOPs) and operations orders (OPORDs). Such a matrix ensures the task force can execute the brigade commander's concept of fires.

But another important link, the company FISTs and combat observation lasing teams (COLTs), must understand the information on the scheme of fires matrix—what their missions are and why—and have the resources in place to accomplish their missions. They need a standardized information format for refining and executing targets, one such as PLOT-CR.

PLOT-CR

Without reinforcing fires, artillery support to a brigade is one DS battalion. With the realignment of our M109A6 battalions into a 3x6 configuration, the brigade commander loses six rounds per battalion volley. Using battlefield calculus, one can only expect seven or eight missions per hour. We can't afford to waste a mission.

The PLOT-CR standardized format ensures the FSO systematically synchronizes every target assigned and his FISTs and COLTs have the details and resources they need to execute every target. But the fact is, few TF FSOs or fire support NCOs (FSNCOs) use

FS Event	WP0001	WP0002	W12D	WP0002
Trigger	LD -90 Min	LD -30 Min	LD	LD
Task	Destroy S MRP	Adjust Smoke to Obscure S/C MRPs from SBF 1	Suppress C/N MRPs for 30 Min	Obscure S/C MRPs from Breach 60 Min
Purpose	To facilitate TF 3-81 breach without receiving direct fire from S MRP.	To ensure smoke is adjusted prior to LD.	To allow SBF forces to occupy SBF positions.	To allow breach force to establish breach lanes.
Method	4 Sorties A-10s and DS/R Arty Provide SEAD (Bn 3-Rds per MRP Vehicle)	1 Btry M825, 1 Rd Adjust	1 Btry per Target, 1 Rd per Min	1,000 M Smoke Screen (2 Btry Built, 1 Btry Sustain)
End State	4 Vehicles Destroyed from the S MRP; POF to TF 3-81	Smoke Adjusted to Obscure N/C MRPs from SBF 1	2 Companies Occupied in SBF	TF 3-81 Established 2 Breach Lanes; POF to TF 3-92

Legend:

Arty = Artillery
Bn = Battalion
Btry = Battery
C = Center
DS = Direct Support
IN = Infantry
LD = Line of Departure
M = Meter
MRP = Motorized Rifle Platoon
N = Northern
POF = Priority of Fires
S = Southern
SBF = Support by Fire
SEAD = Suppression of Enemy Air Defenses
R = Reinforcing
Rds = Rounds
TF = Task Force

Task Force Scheme of Fires Matrix. This is a tear-away of the top portion of the scheme of fires matrix that ensures task force fire support is synchronized with the brigade commander's concept of fires. The bottom portion of the matrix covers primary and backup observers and their locations for each target and radar coverage, fire support coordination measures (FSCM) and airspace coordination areas (ACAs) for targets (as necessary) with "Remarks" for miscellaneous information the final listing in that first column.

PLOT-CR (purpose, location, observer, trigger, communications net and rehearsal) for their shooters. In an informal survey recently conducted among 34 Field Artillery Officer Advanced Course and Advanced NCO Course students at Fort Sill, Oklahoma, only three had ever systematically applied the mnemonic PLOT-CR (or some other format providing the same information).

The Fire Support Team Observer/Controllers at the Combat Maneuver Training Center (CMTC) in Hohenfels, Germany, have been teaching PLOT-CR to both maneuver and artillery leaders for well over two years.

• *Purpose.* The target planner must clearly define the purpose of the target for the observer. In deliberate fire planning, the majority of targets are developed at the brigade targeting meeting.

According to *FM 6-20-10 The Targeting Process*, "The S3 is responsible for giving a detailed description of the commander's concept of the operation to all personnel engaged in brigade-level targeting. The guidance that results from this interpretation must specify the targets that the commander feels are most important and the targets that pose the greatest threat to the mission."

A good example of a target purpose is "destroy five BMPs at obstacle." If the maneuver S3 can't provide that level of detail, the target should be deleted. An observer won't be able to execute the target if the target planners are vague.

• *Location.* The target location usually comes from a map spot. Although an eight-digit location is preferred, a six-digit location will suffice.

A key feature of the deliberate fire planning process is bottom-up refinement. *FM 6-71 Fire Support for the Combined Arms Commander* states very correctly that "if you begin the battle with no refinements, you are in for a long day." The company FISTs refine their targets to support the company scheme of maneuver or defense.

The FSO ensures the FISTs' refinements don't change the purpose of the target as stated in the brigade commander's concept of fires. For example, if during refinement, the company commander wants to move a target whose purpose is to destroy vehicles at an obstacle, then that refinement should not be processed.

The FISTer takes additional steps to locate the target when the unit is in the defense. After he refines the target, he surveys the location using any of the precision location devices available. He then fires one check round on the target to ensure the round lands exactly where the commander needs it.

• *Observer.* FM 6-20-10 directs the TF FSO to "assign observers and backup observers for all TF targets and brigade targets assigned to the task force." If a unit only can fire seven or eight missions an hour, the FSO must ensure redundant eyes for each mission.

The company FSO normally designates who the backup observer will be. He also ensures the backup observer will be in a position to see the target. The TF FSO or FSNCO must know who the backup observer is and his location. The name of an individual or the bumper number of the vehicle is standard—a backup observer identified as "2d Platoon" is too vague.

• *Trigger. FM 6-20-40 Fire Support for Brigade Operations (Heavy)* defines a trigger as "a target area of interest (TAI) in the brigade S2's intelligence preparation of the battlefield (IPB). The TAI should be under surveillance at all times (use night observation devices and planned illumination targets at night). The element observing the TAI should have the authority to fire or have a direct communications link to whoever has the authority to fire."

Although an observer will be positioned to see the target, he may not be able to see the target's trigger. In this situation, additional eyes must be provided to overwatch the trigger. The TF FSO or FSNCO are the link between the trigger observer and the target observer, if they are on different frequencies. The TF FSO or FSNCO accomplish this by coordinating closely with the S2.

Synchronizing the trigger-to-target should occur early in the war-gaming process. If the TF fire support triggers don't match the TAIs on the overlay, the fires probably will hit the target late.

• *Communications Net.* As a general rule, both the TF and brigade FSOs have dedicated frequencies; however, the number of nets is not the problem. Terrain, distance and poor preventive maintenance checks and services (PMCS) are a few of the reasons that FISTs aren't able to communicate. Maintaining constant communications is a challenge for all levels of fire support.

FM 6-20-20 Fire Support at Battalion Task Force and Below directs the use of "primary and alternate communication nets." The TF FSO and FSNCO must continually check their communications to ensure they can talk to each other as well as to the brigade FSO and company FISTs. In addition, the company FISTs must be able to talk to backup observers or anyone in the fire support system.

• *Rehearsal.* The rehearsal is a crucial portion of the fire support preparation for combat. Ideally, the TF FSO rehearses fire support before the integrated fire support-maneuver rehearsal. Regardless, he must rehearse all his primary and backup observers.

The most common type of fire support rehearsal is over the radio. The TF FSNCO ensures the primary and backup observers are on the net before the rehearsal begins. A radio rehearsal checks communications among the FSOs, FISTs and backup observers and ensures all are in synch to accomplish the limited number of fire missions.

The scheme of fires matrix and PLOT-CR are two tools to help commanders and fire supporters accomplish the brigade commander's concept of fires and that those fires are synchronized and integrated with the scheme of maneuver. These tools help ensure the task, purpose, method and end state for fires is clear from the brigade to the first-line observer and that each target is executable.

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